

Supplemental Amendment Under 37 C.F.R. § 1.111
Serial No. 10/050,972
Our Ref: Q68160

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

B₁ Claim 1 (previously presented) A method for manufacturing a plasma display panel, comprising:

laying a front substrate and a rear substrate on each other with a sealing frit therebetween;

heating said front substrate, said rear substrate and said sealing frit in a chamber and exhausting impurity gas from both of said substrates by lowering internal pressure of said chamber;

melting said sealing frit in said chamber by further heating said front substrate, said rear substrate and said sealing frit after the pressure of said chamber reaches atmospheric pressure; and

solidifying said sealing frit in said chamber and sealing up said front substrate and said rear substrate.

Claim 2 (original) The method for manufacturing a plasma display panel according to claim 1, wherein said melting said sealing frit and said sealing up said front and rear substrates are continuously carried out in said chamber.

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Claim 3 (original) The method for manufacturing a plasma display panel according to claim 1, wherein an exhaust pipe is connected to said rear substrate with a fixing frit, and at least one of said sealing frit and said fixing frit is made of crystallized glass.

Claim 4 (original) The method for manufacturing a plasma display panel according to claim 2, wherein an exhaust pipe is connected to said rear substrate with a fixing frit, and at least one of said sealing frit and said fixing frit is made of crystallized glass.

Claim 5 (original) The method for manufacturing a plasma display panel according to claim 1, further comprising a step of heating said front and rear substrates while depressurizing an inside of said chamber after said sealing up said front and rear substrates.

Claim 6 (original) The method for manufacturing a plasma display panel according to claim 3, further comprising a step of heating said front and rear substrates while depressurizing an inside of said chamber after said sealing up said front and rear substrates.

Claim 7 (original) The method for manufacturing a plasma display panel according to claim 4, further comprising a step of heating said front and rear substrates while depressurizing an inside of said chamber after said sealing up said front and rear substrates.

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Claim 8 (original) The method for manufacturing a plasma display panel according to claim 1, further comprising a step of filling a space between said front and rear substrates outside said chamber with a discharge gas.

Claim 9 (original) The method for manufacturing a plasma display panel according to claim 1, wherein a level difference is provided to said sealing frit, and, said impurity gas is exhausted from a space between said front and rear substrates outside through gaps formed between said front and rear substrates by said level difference in said exhausting said impurity gas.

Claim 10 (original) The method for manufacturing a plasma display panel according to claim 9, wherein said laying said front and rear substrates on each other comprises the steps of applying a first continuous frit to an edge of one of said front and rear substrates and selectively applying a second frit onto said first frit.

Claim 11 (original) The method for manufacturing a plasma display panel according to claim 1, wherein said exhausting said impurity gas comprises a step of introducing at least one kind of gas selected from the group consisting of an oxygen gas, an inert gas, and dry air into said chamber.

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Claim 12. (previously presented) The method for manufacturing a plasma display panel according to claim 1, wherein said melting said sealing frit and said solidifying said sealing frit each comprise a step of lowering internal pressure of said chamber.

Claim 13. (previously presented) The method for manufacturing a plasma display panel according to claim 3, wherein said melting said sealing frit and said solidifying said sealing frit each comprises a step of lowering internal pressure of said chamber.

Claim 14. (previously presented) The method for manufacturing a plasma display panel according to claim 4, wherein said melting said sealing frit and said solidifying said sealing frit each comprises a step of lowering internal pressure of said chamber.

Claim 15. (previously presented) The method for manufacturing a plasma display panel according to claim 1, wherein said melting said sealing frit and said solidifying said sealing frit each comprises a step of introducing at least one kind of gas selected from the group consisting of an oxygen gas, an inert gas, and dry air into said chamber.

Claim 16. (previously presented) The method for manufacturing a plasma display panel according to claim 3, wherein said melting said sealing frit and said solidifying said sealing frit each comprises a step of introducing at least one kind of gas selected from the group consisting of an oxygen gas, an inert gas, and dry air into said chamber.

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Claim 17. (previously presented) The method for manufacturing a plasma display panel according to claim 4, wherein said melting said sealing frit and said solidifying said sealing frit each comprises a step of introducing at least one kind of gas selected from the group consisting of an oxygen gas, an inert gas, and dry air into said chamber.

Claim 18. (previously presented) The method for manufacturing a plasma display panel according to claim 1, wherein the pressure inside said chamber reaches atmospheric pressure when oxygen gas is introduced into said chamber.

Claim 19. (previously presented) The method for manufacturing a plasma display panel according to claim 2, wherein the pressure inside said chamber reaches atmospheric pressure when oxygen gas is introduced into said chamber.

Claim 20. (previously presented) The method for manufacturing a plasma display panel according to claim 3, wherein the pressure inside said chamber reaches atmospheric pressure when oxygen gas is introduced into said chamber.

Claim 21. (previously presented) The method for manufacturing a plasma display panel according to claim 5, wherein the pressure inside said chamber reaches atmospheric pressure when oxygen gas is introduced into said chamber.

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Kindly add the following new claims 22 and 23.

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Claim 22 (new) A method for manufacturing a plasma display panel, comprising:

assembling a front substrate and a rear substrate in a face-to-face relationship with a sealing frit therebetween at edge portions thereof so as to form an inner space between said front substrate and said rear substrate with such a hole in said sealing frit that permits gas to flow out of said inner space to the outside,

heating the assembled front and rear substrates to a first temperature in a chamber and exhausting impurity gas from said inner space through said hole,

further heating said assembled front and rear substrates to a second temperature higher than said first temperature to melt said sealing frit in said chamber, and

solidifying said sealing frit and sealing up said assembled front and rear substrates.

Claim 23 (new) The method for manufacturing a plasma display panel according to claim 22, wherein internal pressure of said chamber is lowered in said heating of the assembled front and rear substrates to said first temperature and oxygen gas is introduced in said chamber in said further heating of said assembled front and rear substrates to said second temperature.